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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,415	02/04/2004	David Hsu	HSUD3002/EM	2389

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EXAMINER
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SUN, SCOTT C

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/770,415	<b>Applicant(s)</b> HSU, DAVID	
	<b>Examiner</b> Scott Sun	<b>Art Unit</b> 2182	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Objections***

2. Claim 1 recites "been connected" where "being connected" is expected.

Claim 1 further recites "a KVM switch ... adapted to *receive a plurality of computers and computer peripheral apparatus*". In light of the specification, it appears applicant intends to mean either "adapted to connect to a plurality of computers and computer peripheral apparatus" or "adapted to receive signals from a plurality of computers and computer peripheral apparatus".

3. Claim 3 recites "mans" where "means" is expected.

4. Claim 4 recites "filtering switching circuit the computers" where "filtering switching circuit and the computer" is expected. Claim 4 further recites "filtering switching circuit the connected computers" where "filtering switching circuit and the connected computers" is expected.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Further regarding claim 1, the functional limitation "adapted to receive" is indefinite because applicant fails to recite what performs this function. For the purpose of examination, examiner will interpret the limitation as "said KVM switch adapted to receive".

Further regarding claim 1, the limitations "a plurality of computers", "computer peripheral apparatus including a keyboard, a mouse, and a display", "pre-set buttons" appear to be structural limitations not directed to the KVM switch applicant is claiming in claim 1. Because a KVM switch works with the above devices, it is unclear if the devices are intended for use with the KVM switch but not required, or structural limitations that are required. If applicant intends these devices to be structural limitations, it is suggested that the preamble of the claim is modified to "a KVM switch system comprising" and body of the claim is modified to clearly state what structural limitations are included in the system.

For the purpose of continuing examination, examiner will interpret claim 1 to be a "KVM switch system" that comprises all devices cited in the body of the claim as structural limitations.

8. Claims 2-3 are rejected as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 2-3 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the specification. In the specification, applicant has stated pre-set button means which "start/close mouse-to-computer selection function", and this statement indicates that the invention is different from what is defined in the claim(s) because claims 2-3 recite "pre-set button means for switching on/off the mouse being connected to said control circuit" which switches on/off the mouse rather than a selection functionality.
9. Claims 4 is rejected because of its dependency on the above rejected claim(s).
10. The following rejections are made based on the examiner's best interpretation of the claims in light of the 35 USC 112 rejections above.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-3 is rejected under 35 U.S.C. 103(a) as being obvious over Ying et al (PG Pub # US2003/0222801).
13. Regarding claim 1, Ying discloses a KVM switch (system in figure 4) comprising a control circuit (switching device 7) and adapted to receive a plurality of computers

(element 10 and 11) and computer peripheral apparatus including a keyboard (3), a mouse (4), and a display (2), said control circuit comprising a program adapted to selectively control output signal from one of said computers to said display subject to the operation of pre-set buttons (hotkey, paragraph 20) of the keyboard and mouse been connected to said control circuit (paragraphs 18, 19, 20).

Ying does not disclose explicitly an electrically insulative housing. However, examiner asserts that insulative housings for electrical devices are well known in the art at the time of invention. Although not necessary, it would be counter-intuitive for a person of ordinary skill in the art to implement a KVM switch without electrically insulative housing as it would be an electrical hazard to the user. Accordingly, examiner asserts it would be obvious for a person of ordinary skill in the art at the time of invention to include an electrically insulative housing for a KVM switch for the benefit of protecting the user from electrical shock.

14. Regarding claim 2, Ying discloses the KVM switch as claimed in claim 1, wherein the keyboard which is connected to said control circuit in said housing has pre-set button means (hotkeys) adapted to switch on/off the mouse being connected to said control circuit in said housing (paragraph 20). Examiner notes that Ying teaches the hotkey pressed switches connection between peripherals (keyboard, mouse, display) and computers. Therefore, each of the peripherals, and specifically the mouse, is being switched on/off from a computer designed by the hotkey.

15. Regarding claim 3, Ying discloses the KVM switch as claimed in claim 1, wherein the keyboard which is connected to said control circuit in said housing has pre-set button mans (hotkeys) for switching on/off the mouse being connected to said control circuit in said housing, and pre-set button means for control switching between the computers and the display. See examiner's notes for claim 3.

16. Claims 4 are rejected under 35 U.S.C. 103(a) as being obvious over Ying et al in view of Gough et al (US Patent #6,901,455).

17. The KVM switch as claimed in claim 1, wherein Ying further discloses said control circuit in said housing comprises: a microprocessor (processing unit 72), which has a control program adapted to connect a keyboard, a mouse, and a plurality of computers (paragraph 18); Examiner notes that Ying teaches the processing unit performs the connection of peripherals to computers, and accordingly, the instructions the processing unit executes constitute the control program.

An OSD, ON SCREEN DISPLAY, control circuit (compiler 71) connected to said microprocessor and adapted to select display picture subject to the program of said microprocessor (paragraph 19);

A filtering switching circuit (multiplexer 70) connected to said OSD control circuit and a display and adapted to filter the picture not selected by said OSD control circuit and to switch to the selected signal for enabling the selected signal to be displayed on the display connected thereto (paragraph 19); Examiner notes that multiplexer by definition is a filter as it selects one output from a plurality of inputs.

A keyboard control circuit (hub 74) connected to said microprocessor and the computers being connected to said microprocessor to serve as an interface between said microprocessor and the connected computers and to examine and convert the output signal of said keyboard into a format readable to said microprocessor (paragraph 19);

A mouse control circuit (hub 74) connected to said microprocessor and the computers at said microprocessor to serve as an interface between said microprocessor and the connected computers and to examine and convert the output signal of said mouse into a format readable to said microprocessor (paragraph 19);

Ying discloses VGA data being transferred from computers to the display (figure 4) but does not disclose a VGA control circuit. However, Gough discloses a VGA control circuit (video connection 102, 110, figure 1) connected to a filtering switching circuit and computers at said microprocessor to serve as an interface between said filtering switching circuit and the connected computers and to examine and convert the output signal of the connected computers into a format readable to said filtering switching circuit (column 2, lines 26-28). Teachings of Ying and Gough are from the same field of KVM switches.

Therefore, it would have been obvious at the time of invention for a person of ordinary skill in the art to combine teachings of Ying and Gough by adding the video connection circuits discloses by Gough into the KVM system disclosed by Ying for the benefit of conforming to various video data transmission standards.



**Conclusion**

18. Other publications are cited to further show the state of the art with respect to KVM switches. Refer to form 892, "Notice of References Cited", for a complete list of relevant prior arts cited by the examiner.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Sun whose telephone number is (571) 272-2675. The examiner can normally be reached on M-F, 10:30am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SS

2/3/2006



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2/6/06